

## Chestnut trees that once dominated the region are being given a second chance

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By Ben Moyer



*Source: American Chestnut Society*

*A project to restore Pennsylvania's lost chestnut trees is under way in Fayette County.*

There are no chestnut trees on Chestnut Ridge. It seems the equivalent of naming a desert sports venue Three Rivers Stadium.

But there once were chestnuts. The Ridge was named for the trees that once covered it, stretching as it does from Indiana, Pa., across the southwestern corner of the state to Fairmont, W.Va., as the western flank of the Alleghenies. So many chestnut trees cloaked the ridge that early explorers thought they saw snow on the heights in June when American chestnuts display plumes of white flowers.

The American chestnut tree was a keystone of the early Keystone State for nature and man. Its heavy and reliable crop of nuts fed deer, elk, bear, turkey, grouse and Native American hunters. Its wood was the perfect basis for a low-tech but growing economy. Hand tools worked the wood easily, yet it was strong, light, and resistant to rot.

Settlers who needed chestnut wood could find a lot in one place. Some accounts from the virgin Appalachian forests cite chestnut trees 10 feet in diameter and more than 100 feet tall, growing straight as a carpenter's rule. American chestnut got the country over the

hump of its early development -- a natural resource ideally suited to the needs and technology of the time.

The phrase "all good things must come to an end" was never more apt, yet never more suspect. By 1940, the American chestnut was virtually gone, but it didn't have to happen. A fungal blight, probably introduced on imported Asian chestnut trees, which were immune, strangled chestnut forests from Maine to Georgia within one human lifetime.

"It's one of the great ecological disasters of current time," said Sara Fitzsimmons, Northern Appalachian science coordinator for The American Chestnut Foundation (TACF), an organization working to restore the native chestnut to American forests. "The chestnut made up 25 percent of the canopy across its range and perhaps 50 percent in some parts of Pennsylvania. When you lose a quarter of the canopy, it's devastation."

Some chestnut trees remain on Chestnut Ridge and throughout Appalachia, which enables the American Chestnut Foundation to pursue its work. Somehow, the roots of now gone trees are still alive, with enough strength to send up sprouts, pathetic shadows of the parent trees. Even these sprouts catch the blight and die. But some live long enough to produce viable seed.

TACF members collect seed for a complex genetic manipulation aimed at producing blight resistant chestnuts for replanting.

"We want to retain the American traits that made the tree so valuable," Fitzsimmons said. "But we also want the resistance, or it can't survive. Our program requires six generations of cross-breeding and [each generation takes] up to 10 years to complete. The first generation is a cross between American and Asian; the next three are 'back crosses' to build up the American heritage. The final two introduce more of the desired Asian trait to ramp up resistance."

TACF has 15 state chapters with 6,000 members and operates experimental chestnut orchards in Virginia and at Penn State University. Fitzsimmons said TACF is getting close to the goal of planting resistant trees into forests.

"We planted the first stock at Penn State in 2002, and they are resisting well. We are on the verge of planting that sixth generation, then testing how it grows in the forest."

Education also is part of the TACF mission. This spring TACF established a demonstration-educational chestnut orchard on Western Pennsylvania Conservancy's Bear Run Nature Reserve at Fallingwater, in Fayette County.

"An opportunity to be involved in the work of the American Chestnut Foundation was something we could not pass up, and it seemed like an ideal partnership," said Sarah Pears, a WPC land stewardship assistant.

Chestnut seedlings now stand along Route 381 in plastic tubes to protect them from deer browsing. Fitzsimmons said that within a few years the trees will be valuable for telling the tragic, but hopeful, story of the chestnut in America.

"One of the great challenges in this work is that most people alive today have no personal knowledge of what we've lost," Fitzsimmons said. "Anyone born after World War II has likely never seen a mature American chestnut tree and has no way of knowing how they supported the whole ecosystem. We hope the planting at Bear Run will help people understand. If we can be successful, future generations will benefit in ways that may not be clear today."

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